

1.0 INTRODUCTION

This Environmental Impact Statement/Environmental Impact Report (EIS/EIR) evaluates the impacts of implementing the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Conservation Plan (Conservation Plan) and issuing a section 10(a)(1)(B) (incidental take) permit based on this plan. The habitat-based Conservation Plan is intended to avoid, minimize, and fully mitigate the incidental take of the covered species from the implementation of the covered activities to the maximum extent practicable. The Conservation Plan also is intended to contribute to the recovery of species listed as threatened or endangered under the Endangered Species Act of 1973, as amended (ESA) (16 United States Code [U.S.C.] 1531-1544), and reduce the likelihood for future listing of unlisted covered species along the LCR. The EIS/EIR has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [C.F.R.] Parts 1500-1508); the U.S. Bureau of Reclamation's (Reclamation) Draft National Environmental Policy Handbook (U.S. Bureau of Reclamation [USBR] 2000a); the California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code [P.R.C.] 21000 et seq.); and the State CEQA Guidelines, as amended (California Code of Regulations [C.C.R.], Title 14, Division 6, 15000 et seq.). Reclamation and the U.S. Fish and Wildlife Service (Service) are the lead agencies for compliance with NEPA, and The Metropolitan Water District of Southern California (Metropolitan) is the lead agency for compliance with CEQA. Together, these agencies have the responsibility for the scope, content, and legal adequacy of the document. Because the terminology and specific needs of NEPA and CEQA do not entirely overlap, explanatory text is provided where needed in the document to account for these differences. For example, CEQA uses the term "proposed project" to refer to the subject of the document, whereas NEPA uses the term "proposed action." In this EIS/EIR, the term used is "proposed action."

1.1 BACKGROUND

1.1.1 Development of the LCR MSCP

The LCR MSCP¹ is proposed to serve as a coordinated, comprehensive conservation approach for the LCR basin for a period of 50 years. The program has been developed and would be implemented and funded by a partnership of state, Federal, and other public and private stakeholders in Arizona, California, and Nevada with interests in managing the water and related resources of the LCR. The LCR MSCP planning area (planning area) extends from the full pool elevation of Lake Mead to the Southerly International Boundary (SIB) with Mexico (Figure 1.1-1). The impetus for the creation of the LCR MSCP was the recognition by the Federal and non-Federal participants of the potential for their activities to affect species listed as threatened or endangered under the ESA, as well as designated critical habitat along the LCR. The participants agreed to form a partnership to develop and implement a long-term

¹ In this EIS/EIR, the term "LCR MSCP" is used to describe the broad program and its participants. The term "Conservation Plan" is used to describe the proposed conservation measures included in Chapter 5 of the LCR MSCP Habitat Conservation Plan (HCP) (Volume II) and described in Chapter 2 of this EIS/EIR.

endangered species compliance and management program for the historic floodplain of the LCR.

1.1.2 ESA Provisions

Section 9 of the ESA provides for the prohibition of “take” of any fish or wildlife species listed as threatened or endangered under the ESA unless specifically authorized by regulation. Take, as defined by the ESA, means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in such conduct” (16 U.S.C. section 1531[18]). “Harm” is further defined to include significant habitat modifications or degradation that actually kill or injure wildlife by significantly impairing behavioral patterns such as breeding, feeding, and sheltering (50 C.F.R. section 17.3). “Harass” is further defined to include intentional or negligent acts or omissions that create the likelihood of significant injury to wildlife through disruption of normal behavior patterns, including breeding, feeding, or sheltering (50 C.F.R. section 17.3). “Incidental take” is defined by the ESA as take that is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity” (50 C.F.R. section 17.22 and 17.32).

The Service, under the provisions of sections 7 and 10 of the ESA, must provide for the authorization of incidental take where such authorization is not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify designated critical habitat.

1.1.3 Overview of the Proposed Action

The proposed action includes two primary components:

1. Implementation of a Conservation Plan by Federal and non-Federal participants that would meet the LCR MSCP goals and objectives, described in Chapter 2.
2. Issuance of an ESA section 10(a)(1)(B) permit by the Service based on the proposed Conservation Plan for non-Federal covered activities described in section 1.2.2 below.

The Conservation Plan is a comprehensive, habitat-based approach developed to provide ESA compliance for a suite of species that are currently listed under the ESA or that may become listed in the future. It was designed to meet ESA requirements for the issuance of a permit under section 10(a)(1)(B), and it includes specific conservation measures for species and habitats² that would avoid, minimize, and fully mitigate the incidental take of the covered species to the maximum extent practicable and contribute to the listed species’ recovery. It also would reduce the likelihood for future listing of unlisted covered species. Because the LCR MSCP is seeking compliance for a 50-year period, the Conservation Plan includes minimization and mitigation measures for species not currently listed under the ESA that may become listed within the term of the permit. The Conservation Plan was developed in accordance with the laws and regulations that govern the operation of the LCR. Collectively, these are referred to as

² For purposes of the Conservation Plan, habitat is defined as the specific places where the environmental conditions (i.e., physical and biological conditions) are present that are required to support occupancy by individuals or populations of a given species. For further detail, refer to Appendix W in Volume IV.

- 1 Figure
- 2 1.1-1 LCR MSCP Planning Area and River Reaches
- 3 (color)

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the “Law of the River” and include, but are not limited to, Federal and state laws, interstate compacts, an international treaty, court decisions, Federal contracts, Federal and state regulations, and multi-party agreements. Selected documents that comprise the Law of the River are summarized in Appendix A.

1.1.4 Use of the EIS/EIR

This joint EIS/EIR is a programmatic document intended to identify to agency decision makers and the public the potential range of impacts associated with the implementation of the proposed action, including significant and beneficial environmental effects. As described below and in section 1.4, each of the three lead agencies has independent regulatory compliance needs that are served by this EIS/EIR. Additionally, the EIS/EIR will serve as the basis for future project-specific NEPA and CEQA compliance documents that will be required once individual conservation projects under the LCR MSCP are more fully defined. The proposed action does not revisit the authorization of any ongoing covered activity. Future covered activities described in section 1.2.2 for which incidental take authorization is being sought under the LCR MSCP may require project-specific NEPA/CEQA compliance prior to implementation.

1.1.4.1 U.S. Fish and Wildlife Service

Issuance of a section 10(a)(1)(B) permit by the Service is an action subject to NEPA compliance. This EIS/EIR addresses the impacts to the environment, including the effects of the incidental take that would be permitted, if the Service were to issue a section 10(a)(1)(B) permit based on the implementation of the proposed action or alternatives.

1.1.4.2 U.S. Bureau of Reclamation

The implementation and funding of the Conservation Plan by Reclamation is an action that is subject to NEPA compliance, even though it would be implemented for beneficial environmental purposes. This EIS/EIR addresses the potential environmental effects that may result from implementing the proposed action and alternatives, including the implementation of a Conservation Plan.

1.1.4.3 The Metropolitan Water District of Southern California

The implementation and funding of the Conservation Plan is a project that is subject to CEQA compliance. The California participants are requesting a section 10(a)(1)(B) incidental take permit for their covered activities on the basis of their participation in the implementation and funding of the LCR MSCP Habitat Conservation Plan (HCP), of which the Conservation Plan is a part. (A non-Federal entity is required to develop an HCP in order to be granted an incidental take permit under section 10(a)(1)(B) of the ESA. The entire LCR MSCP HCP is included in Volume II. In addition to the Conservation Plan, which is included in Chapter 5, the HCP contains a number of required sections, such as descriptions of covered activities, impacts on covered species expected to result from the covered activities, LCR MSCP governance structure, and implementation costs, that would not result in impacts to the environment and thus are not specifically addressed in this EIS/EIR.) Additionally, the LCR MSCP EIS/EIR and HCP may be used in support of a section 2081 permit from the California Department of Fish and Game (CDFG) for incidental take of species by California’s covered activities in compliance with the

California Endangered Species Act (CESA). This EIS/EIR addresses the potential environmental effects that may result from implementing the proposed action and alternatives, including the impact of the authorized incidental take of covered species that is being requested by the California participants and the impacts of implementing a Conservation Plan.

1.2 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.2.1 Need for the Proposed Action

The ESA directs Federal agencies to support the conservation of listed species and ensure that their actions do not jeopardize listed species or critical habitat. Additionally, no taking of listed species by non-Federal agencies is allowed without a permit from the Service. Federal and non-Federal actions related to the ongoing and future operations of the LCR water delivery and power systems are affecting listed species and critical habitat, and may contribute to future listing of additional species. To address the needs of the species and the need to comply with the ESA, this Conservation Plan is proposed with the purpose of avoiding jeopardy, supporting the conservation of listed species, and reducing any contribution that ongoing or future operations may make to new listings. Additionally, the Service will use this analysis to support its decision concerning an incidental take permit for covered non-Federal activities.

As noted, the Federal participants in the LCR MSCP (Reclamation, the U.S. National Park Service [NPS], U.S. Bureau of Indian Affairs [BIA], U.S. Bureau of Land Management [BLM], the Service, and the Western Area Power Administration [Western]), acting within the scope of their legal authority and obligations, currently undertake or may undertake activities along the LCR that have the potential to affect and result in the incidental take of species that are listed under the ESA, or that may be listed in the future. Ongoing and future Federal actions that are covered by the proposed Conservation Plan are outlined in section 1.2.2 of this EIS/EIR and more fully described in Chapter 2 of the *Lower Colorado River Multi-Species Conservation Program Biological Assessment* (LCR MSCP BA) ³, which comprises Volume III. Federal agencies are required under section 7(a)(2) of the ESA to ensure that their actions are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify designated critical habitat. Under section 9 of the ESA, Federal agencies also may not “take” listed species without authorization provided by the Service in the incidental take statement contained in its Biological Opinion (BO) issued pursuant to section 7(b).

The actions that the non-Federal participants in the LCR MSCP are engaged in or may become engaged in along the LCR that have the potential to affect and result in the incidental take of species that are listed under the ESA, or that may be listed in the future, are outlined in section 1.2.2 of this EIS/EIR and more fully described in Chapter 2 of the LCR MSCP HCP. Under section 9 of the ESA, non-Federal entities may not “take” listed species without authorization. In order to comply with section 9, the non-Federal participants are requesting such authorization based on the implementation of the LCR MSCP HCP, which includes the proposed Conservation Plan.

³ To facilitate compliance with section 7(a)(2), Federal agencies may prepare a BA, pursuant to section 7(c)(1) that identifies the likely effects of the Federal action on threatened and endangered species.

1 The Conservation Plan, as outlined in the LCR MSCP HCP, documents the extent of the
2 incidental take for which authorization is being requested under ESA sections 7 and 10(a)(1)(B),
3 and includes measures to avoid, minimize, and mitigate the effect of that level of take to the
4 maximum extent practicable. The Conservation Plan covers both Federal and non-Federal
5 actions over a 50-year period. The Federal participants will submit the Conservation Plan as
6 part of their proposed action for consideration under section 7 consultation. The non-Federal
7 participants will submit the Conservation Plan with their application for a section 10(a)(1)(B)
8 permit to the Service. The Service will use the Conservation Plan as part of its determination
9 under sections 7 and 10 on issuing an incidental take statement and incidental take permit.

10 The implementation of the Conservation Plan would provide the mechanism to meet the needs
11 of the Service, the Federal participants, and the non-Federal participants for incidental take
12 authorization under the ESA for ongoing and future actions on the LCR. Implementation of the
13 Conservation Plan would not be contingent on actually undertaking any of the future covered
14 activities, but would proceed pursuant to the schedule outlined in the proposed Conservation
15 Plan as provided in Tables 2.1-8a-d (included in section 2.1.1.6 as part of the description of the
16 proposed action).

17 **1.2.2 Actions for Which ESA Coverage is Requested**

18 The proposed action is the implementation of a regional Conservation Plan and issuance of
19 incidental take authorizations for the covered activities over the 50-year term of the LCR MSCP.
20 In order to obtain comprehensive ESA coverage for the covered activities, the Federal and non-
21 Federal participants have included future flow- and non-flow related activities that are
22 reasonably expected to be implemented or undertaken during the term of the LCR MSCP.
23 Examples of such future activities include the development of additional tribal lands for
24 agriculture by BIA and the change in point of diversion of water on the LCR by non-Federal
25 participants. These future activities are not part of the proposed action and are not part of the
26 actions analyzed in this EIS/EIR. The potential environmental effects of conducting these
27 future activities in combination with those of the proposed action are considered in the
28 cumulative impact analysis set out in Chapter 4.

29 The following describes the ongoing and future Federal and non-Federal projects, actions, and
30 activities (i.e., covered activities) for which ESA coverage is being sought. The environmental
31 impacts of these activities are not being evaluated in this EIS/EIR, with the exception of those
32 impacts to covered species as a result of incidental take authorization. Four categories of
33 covered activities are included:

- 34 • ongoing flow-related activities;
- 35 • future flow-related activities;
- 36 • ongoing non-flow-related activities; and
- 37 • future non-flow-related activities.

38 Certain ongoing activities have been subject to previous NEPA and/or CEQA compliance
39 actions; others pre-date these laws. This EIS/EIR does not revisit the authorization of any
40 ongoing covered activity; rather, it is limited to assessing the impacts of the ESA take

authorization being requested for the covered activities and the impacts of the Conservation Plan that is the basis for the incidental take permit.

ESA coverage also is being sought for incidental take of covered species that would occur as a result of actions required to implement the Conservation Plan. All of the covered activities would be implemented within the LCR MSCP planning area.

1.2.2.1 Federal Ongoing and Future Flow-Related and Non-Flow-Related Actions⁴

Federal ongoing and future covered activities for which incidental take authorizations are being sought under the ESA are as follows:

Reclamation

Ongoing flow-related river management operations for which incidental take authorization is being sought under the ESA include the following:

- Flood control releases from dams along the LCR and management of flood control space and target elevations of reservoirs.
- Delivery of Colorado River water to Arizona, California, and Nevada within each state's apportionment to individual entitlement holders in that state pursuant to water delivery contracts or other delivery obligations; the cumulative water apportionment for these three states is 7.5 million acre-feet (maf) for normal water years.
- Annual operation of the Colorado River in accordance with the Long-Range Operating Criteria.
- Daily operation of the Colorado River below Hoover, Davis, and Parker dams and at Senator Wash, Imperial, and Laguna dams.
- Electric power generation at Hoover, Davis, and Parker powerplants.
- Preparation and maintenance of Decree Accounting reports (reports of the diversion and use of Colorado River water, as well as some other operational parameters).
- Delivery of Mexico's basic apportionment as provided by the *Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande – Treaty Between the United States of America and Mexico*, dated February 3, 1944 (1944 Water Treaty) (annual delivery of 1.36 maf of water from the Colorado River at the Northerly International Boundary [NIB] with Mexico and up to 140,000 acre-feet [af] at the SIB).
- Temporary emergency delivery of a portion of the 1944 Water Treaty waters in the vicinity of the City of Tijuana, Mexico, resulting in a temporary change in point of diversion and delivery of these waters from the NIB to Lake Havasu.
- Execution and administration of individual Water Supply Project contracts under the Lower Colorado River Water Supply Act, allowing water to be diverted for Water

⁴ Federal actions are described in detail in Chapter 2 of the LCR MSCP BA.

Supply Project purposes by users at any approved location along the California border adjoining the Colorado River once a contract is executed.

Future flow-related actions for which incidental take authorization is being sought under the ESA include the following:

- Application of specific surplus and shortage guidelines that would allow for the release of water (excluding 1944 Water Treaty water) in excess of the 7.5 maf of entitlement waters in surplus years or less than the 7.5 maf in shortage years.
- U.S. entitlement holders may be permitted to divert and beneficially use water released for flood control purposes in excess of downstream demand. Total diversions by U.S. entitlement holders would be limited to the maximum amount of, and only for the duration of, the specific flood control release.
- Specific administrative actions related to the delivery and use of Colorado River water in the Lower Division States (Arizona, Nevada, and California).

Ongoing non-flow-related river management operations for which incidental take authorization is being sought under the ESA include the following:

- Channel maintenance from Davis Dam to the SIB, including (a) wash fan removal, (b) maintenance and care of unprotected banklines, (c) levee location and maintenance, (d) dredging of settling basins, (e) maintenance of jetties and training structures, (f) stockpile replenishment, and (g) riprap placement and haul roads.
- Operation and maintenance of major Federal facilities (e.g., the Central Arizona Project at Lake Havasu; Palo Verde Diversion Dam; and Imperial, Laguna, and Senator Wash dams) and miscellaneous features, (e.g., drains, wasteways, weirs, siphons, boat ramps, gauges, survey markers, and drainage and groundwater monitoring wells); maintenance activities at the SIB.
- Maintenance of backwater areas created by various features associated with river management.
- Maintenance in the Limitrophe Division of the Colorado River, which extends from the NIB to the SIB. Actions include maintaining the bankline road, the levee, various wasteways and drains flowing to the river, and the Bypass Drain that carries agricultural drainage water to the Cienega de Santa Clara in Mexico.

Future non-flow-related actions for which incidental take authorization is being sought under the ESA include the following:

- Operation and maintenance of dikes and outlet works at Topock Marsh. Future restoration and habitat improvement at the marsh may be necessary and would be coordinated between the Service and Reclamation.
- Implementation of the Laguna Reservoir Restoration and Enhancement Project, which includes creation of incremental storage capacity by excavating a large channel that extends upstream from the pool near the face of Laguna Dam; potential habitat restoration; and construction of a small inlet canal.

- Stabilization and maintenance of unprotected banklines.
- Construction of up to 41 jetties.
- Establishment of new stockpiles (e.g., riprap, gravel), including access roads.

Western Area Power Administration

Incidental take authorization is being sought under the ESA for the continuation of current contract conditions and practices related to the release of LCR water for the operation of hydroelectrical power generating facilities throughout the 50-year term of the LCR MSCP. It is assumed that power generated at Hoover Dam will continue to be marketed pursuant to the 1928 Boulder Canyon Project Act and other relevant authorities. Hydropower availability will continue to be subject to water schedules and interagency coordination will continue pursuant to Reclamation and Western's Joint Operating Agreement.

National Park Service

Three broad categories of non-flow-related projects in the Lake Mead National Recreation Area (NRA) for which incidental take authorization is being sought under the ESA include the following:

- Riparian habitat restoration by replacing non-native species with native vegetation, including potential projects on both Lake Mead and Lake Mohave.
- Fishery management, including both native fish propagation and the enhancement of sportfishing opportunities in Lake Mead and Lake Mohave.
- Boating access improvements, including maintenance of existing boating access and the potential for enhancement of existing ramps at Lake Mead and Lake Mohave.

Additionally, incidental take authorization is being sought under the ESA for the following flow-related actions:

- In managing the Lake Mead NRA, the NPS makes decisions regarding the temporal and spatial diversion (i.e., whether to divert surface flows or pump) of its Colorado River water rights and, in some situations, return flows to the river.

Bureau of Indian Affairs

Ongoing activities for which incidental take authorization is being sought under the ESA include the following:

- Irrigation system operation and maintenance.
- Water conservation practices intended to make the most efficient use on the tribal lands of the water diverted to the irrigation systems.
- Riparian habitat rehabilitation and restoration.
- Wildland fire suppression activities, including fuel hazard reduction around dwellings (e.g., tree and brush trimming or removal as appropriate).

- Woodland and shoreline maintenance project on the Chemehuevi Indian Reservation.
- Tribal decisions regarding the temporal and spatial diversion (i.e., whether to divert surface flows or pump) of their Colorado River water rights and, in some situations, return flows to the river.

Future activities for which incidental take authorization is being sought under the ESA include the following:

- Patching or re-lining canals that are currently lined, or lining un-lined stretches of canal.
- Continuing ongoing water conservation practices into the future and possibly intensifying these practices. Other options include storage of water and increased reuse of irrigation and other reclaimed water.
- Farmland development, including construction of irrigation systems.
- Riparian habitat rehabilitation and restoration.
- Headgate Rock Dam water and power operations and maintenance.
- Wildland fire management, including the management of fuels/hazardous vegetation through the use of, or combination of, mechanical treatments, prescribed fire, wildland fire use, and chemical treatments as approved by the local tribal leadership.

U.S. Fish and Wildlife Service

The Service is not requesting ESA coverage for any of its activities on National Wildlife Refuges (NWR) or National Fish Hatcheries in the planning area. The Service does have LCR water allocations and information on these is provided below. These allocations are included within the 7.5 maf of diversions for which the LCR MSCP participants are requesting coverage.

In managing the four NWRs along the LCR, the Service would continue to make decisions regarding the temporal and spatial diversion (diverting surface flows or pumping) of its Colorado River water rights and, in some situations, return flows to the river. Specifically:

- Havasu NWR has an entitlement in annual quantities reasonably necessary to fulfill the purposes of the refuge, not to exceed 41,839 af of water diverted from the Colorado River mainstem or 37,339 af of consumptive use of mainstem water, whichever is less. Bill Williams River NWR withdraws less than 2 af of Colorado River water from its headquarter's pump under Havasu's water rights.
- Cibola NWR has an entitlement for the diversion of 27,000 af annually (afy) from the mainstem or the consumptive use of 16,793 afy from the mainstem, whichever is less, with a priority date of August 21, 1964. Additionally, Cibola has a diversionary right for 7,500 afy, for the purpose of circulation through Cibola Lake.
- Imperial NWR has an entitlement in annual quantities reasonably necessary to fulfill the purposes of the refuge, not to exceed 28,000 af of water diverted from the mainstem or 23,000 af consumptive use of mainstem water, whichever is less.

Bureau of Land Management

BLM makes decisions regarding the temporal and spatial diversion (i.e., whether to divert surface flows or pump) of its Colorado River water rights and, in some situations, return flows to the river. BLM is not seeking coverage for any additional actions. It completed a previous section 7 consultation on its discretionary actions along the LCR. Lands managed by BLM may be selected, through cooperative planning between the LCR MSCP Executive Director and BLM, for the use in implementation of LCR MSCP-sponsored conservation projects along the LCR.

1.2.2.2 Non-Federal Ongoing and Future Flow-Related and Non-Flow-Related Actions⁵

Non-Federal ongoing covered activities for which incidental take authorizations are being sought under the ESA are as follows:

Arizona

Arizona's ongoing flow-related projects for which incidental take authorization is being sought include the following:

- Diversion of up to 2.8 maf of Arizona's full annual entitlement, plus surplus, plus Arizona's share of any unused apportionment, plus the volume of return-flow as applicable.
- Operation, maintenance, and replacement of existing water diversion and conveyance facilities and electrical generation and transmission facilities within the planning area.
- The continued contracting for, ordering of, and scheduling of Federal hydroelectric power by purchasers in Arizona to maximize the economic value of such power generation within the constraints of the water release schedule(s).

Future flow-related projects for which incidental take authorization is being sought under the ESA include the following:

- Colorado River water contracts for the approximately 20,000 af of unallocated Arizona Colorado River water.
- Diversions, discharges, and return flows through existing facilities on the LCR.
- Permanent transfers of entitlement and change in points of diversion of up to 200,000 afy.
- Full use of Colorado River entitlements (change in point of diversion) by existing contractors and decreed water right holders, including but not limited to the City of Kingman and the City of Quartzite.

⁵ Non-Federal actions are described in detail in Chapter 2 of the LCR MSCP HCP.

- Temporary and intermittent water exchanges, forbearances, and associated changes in points of diversion for Arizona water banking activities or short-term (i.e., less than 5 years) leasing.

- Execution, administration, and operation of extended, renewed, new, or additional contracts for hydroelectric power from hydroelectric facilities at Hoover Dam, Davis Dam, Parker Dam, Headgate Rock Dam, Siphon Drop, and Pilot Knob Power Plant by power users in Arizona.

Ongoing non-flow-related projects:

- Operation, maintenance, and replacement of existing water diversion and conveyance facilities and electrical generation and transmission facilities within the planning area.

Ongoing non-flow-related Arizona Game and Fish Department (AGFD) programs and activities for which incidental take authorization is being sought under the ESA include the following:

- Vegetation and habitat management programs.
- Fish surveys (surveys are not for threatened or endangered species) and fish stocking activities.
- Maintenance of aids to navigation and boating access.
- Law enforcement patrol activities.

Future non-flow-related projects for which incidental take authorization is being sought under the ESA include the following:

- Maintenance and replacement of existing water diversion and conveyance facilities and electrical generation and transmission facilities within the planning area.
- AGFD programs and activities described above and AGFD projects related to implementation of the Conservation Plan.

California

Ongoing flow-related projects for which incidental take authorization is being sought under the ESA include the following:

- Diversion of up to 4.4 maf of California's full annual entitlement (consistent with the Quantification Settlement Agreement [QSA]⁶ executed among three California water

⁶ The QSA would implement major components of California's Draft Colorado River Water Use Plan (California Plan) and provide part of the mechanism for California to reduce its diversions of Colorado River water to the state's normal year apportionment of 4.4 maf. The QSA components would provide a framework for conservation measures and water transfers for a period of up to 75 years. The Coachella Valley Water District, Imperial Irrigation District, and Metropolitan are signatory to the QSA.

1 agencies on October 10, 2003), plus California's share of any unused apportionment and
2 designated surpluses, plus return flows as applicable.

- 3 • All operation, maintenance, and replacement activities associated with existing water
4 diversion and conveyance facilities, and electrical power generation and transmission
5 facilities within the planning area.
- 6 • Contracting for, ordering of, and scheduling of Federal hydroelectric power by
7 purchasers in California to maximize the economic value of such power generation
8 within the constraints of the water release schedule(s).

9 Future flow-related projects for which incidental take authorization is being sought under the
10 ESA include the following:

- 11 • Diversions, discharges, and return flows of mainstem Colorado River water through
12 existing facilities on the LCR.
- 13 • Change of up to 800,000 afy of diversions, discharges, and return flows by
14 administrative actions, which may include changes to points of diversion (e.g.,
15 associated with the LCR Water Supply Project), interstate water banking, forbearance,
16 inadvertent overruns, water marketing, and water transfers, or any other actions as
17 made possible from any future agreements and/or measures taken by the Colorado
18 River Board of California or contract holder(s). Included within the 800,000 afy change
19 in point of diversion are: (1) the change in point of diversion of up to 200,000 afy from
20 Imperial Dam to Lake Havasu pursuant to the Agreement for Transfer of Conserved
21 Water by and between the Imperial Irrigation District and the San Diego County Water
22 Authority, dated April 29, 1998, as amended; and (2) the change in point of diversion of
23 up to 77,700 afy from Imperial Dam to Lake Havasu transferred to the San Diego County
24 Water Authority, as described in the Allocation Agreement among the United States of
25 America, the Metropolitan Water District of Southern California, Coachella Valley Water
26 District, Imperial Irrigation District, San Diego County Water Authority, the La Jolla,
27 Pauma, Pala, Rincon, and San Pasqual Bands of Mission Indians, the San Luis Rey River
28 Indian Water Authority, the City of Escondido, and Vista Irrigation District, dated
29 October 10, 2003. Future changes in points of diversion within the 800,000 afy are
30 projects that would be implemented in accordance with the QSA or contemplated in the
31 Draft California Colorado River Water Use Plan.
- 32 • Execution, administration, and operation of extended, renewed, new, or additional
33 contracts for hydroelectric power from hydroelectric facilities at Hoover Dam, Davis
34 Dam, Parker Dam, and Headgate Rock Dam, Palo Verde Diversion Dam, Siphon Drop
35 Power Plant and Pilot Knob Power Plant by power users in California.

36 Ongoing non-flow-related projects for which incidental take authorization is being sought
37 under the ESA include the following:

- 38 • Operation, maintenance and replacement of existing water diversion and conveyance
39 facilities, and electrical generation and transmission facilities within the planning area.

1 Future non-flow-related projects for which incidental take authorization is being sought under
2 the ESA include the following:

- 3 • Operation, maintenance and replacement of existing water diversion and conveyance
4 facilities, and electrical generation and transmission facilities within the planning area.

5 *Nevada*

6 Ongoing flow-related projects for which incidental take authorization is being sought under the
7 ESA include the following:

- 8 • Diversion of up to 0.3 maf of Nevada's full annual entitlement, plus surplus flows, plus
9 Nevada's share of any unused apportionment, plus volume of return flows as
10 applicable.
- 11 • All operation, maintenance, and replacement of existing water diversion and
12 conveyance facilities and electrical generation and transmission facilities within the
13 planning area.
- 14 • Contracting for, ordering of, and scheduling of Federal hydroelectric power by
15 purchasers in Nevada to maximize the economic value of such power generation within
16 the constraints of the water release schedule(s).

17 Future flow-related projects for which incidental take authorization is being sought under the
18 ESA include the following:

- 19 • Change of future volumes of diversions, discharges, and return by administrative
20 actions, which may include changes to points of diversion, new points of diversion,
21 interstate water banking, water marketing, and water transfers, or any other actions as
22 made possible from any future agreements and/or measures taken by the Colorado
23 River Commission of Nevada or contract holder(s). The potential changes in flows from
24 future projects by Nevada are not expected to exceed 233,000 af of consumptive use.
25 Consumptive use includes return flows from activities on the LCR.
- 26 • Potential changes to existing flows into Lake Mead from the Muddy and Virgin rivers
27 (i.e., inflows discharging within the high pool elevation of Lake Mead), which may affect
28 lake levels. Flows from the Muddy and Virgin rivers pass into Lake Mead and could be
29 increased by augmentation from potential future projects implemented outside of the
30 LCR MSCP planning area along the Muddy and Virgin rivers (e.g., actions such as
31 purchasing irrigation water shares), or decreased by construction of upstream water
32 diversion and conveyance facilities. Those activities that would be implemented outside
33 of the planning area and that could affect lake levels, however, are not covered under
34 the Conservation Plan, including effects of these actions on the Muddy and Virgin
35 rivers.
- 36 • Temporary water exchanges, forbearances, and associated changes in points of diversion
37 for water banking activities or short-term leasing.

- Execution, administration, and operation of extended, renewed, new, or additional contracts for hydroelectric power from hydroelectric facilities at Hoover, Davis, Parker, and Headgate Rock dams by power users in Nevada.

Ongoing non-flow-related projects for which incidental take authorization is being sought under the ESA include the following:

- Operation, maintenance and replacement of existing water diversion and conveyance facilities and electrical generation and transmission facilities within the planning area.

Ongoing non-flow-related Nevada Department of Wildlife (NDOW) programs and activities for which incidental take authorization is being sought under the ESA include the following:

- Fish surveys using electrofishing, netting, and angling (these surveys are not for threatened or endangered species).
- Sport Fish Restoration Act-funded sport fish enhancement projects.
- Wildlife surveys (these surveys are not for threatened or endangered species).
- Aquatic, wetland, and riparian habitat maintenance and restoration activities, including installation of artificial fishery habitat enhancement at Lake Mead and Lake Mohave.
- Revegetation activities for aquatic, wetland, and riparian enhancement.
- Maintenance of aids to navigation and boating access along the LCR and in Lake Mead and Lake Mohave.
- Law enforcement patrol activities, including boating safety programs in both the mainstem of the LCR and mainstem reservoirs and lakes.

Future non-flow-related projects for which incidental take authorization is being sought under the ESA include the following:

- Operation, maintenance and replacement of existing water diversion and conveyance facilities and electrical generation and transmission facilities within the planning area.
- NDOW programs and activities described above.

1.2.3 Purpose of the EIS/EIR

The purpose of the EIS/EIR is to analyze the environmental effects of implementing the Conservation Plan by both the Federal and non-Federal participants for a 50-year period, as well as analyze the impacts of the incidental take from the covered activities that would be authorized by the section 10(a)(1)(B) permit. There is no parallel requirement to evaluate the environmental effects of authorizing incidental take through an incidental take statement under section 7, although the analysis of incidental take of covered species in this EIS/EIR includes the effects caused by both the Federal and non-Federal actions.

1 This EIS/EIR and the accompanying HCP and BA contain descriptions of the ongoing and
2 future activities for which incidental take coverage is sought under the ESA by the Federal and
3 non-Federal participants. Except for the effect of the authorized incidental take of covered
4 species, which is part of the proposed action, this EIS/EIR does not evaluate the environmental
5 effects of the covered activities and does not revisit NEPA or CEQA authorizations for ongoing
6 activities or provide NEPA or CEQA authorization for future activities.

7 **1.2.4 Scope of the EIS/EIR**

8 This EIS/EIR evaluates only the impacts of implementing the Conservation Plan and issuance
9 of a section 10(a)(1)(B) permit by the Service based on this plan because these are the two
10 components of the proposed action. The ongoing covered activities have obtained NEPA
11 and/or CEQA authorizations to the extent required by laws in effect at the time they were
12 approved, and future covered activities will be required to obtain the appropriate
13 authorizations. Although specific regions of influence have been developed for individual
14 resources (e.g., socioeconomic and air quality impacts could affect a larger area than noise
15 impacts or impacts to cultural resources, which are site-specific and highly localized), impacts
16 generally would occur in the vicinity of the historic floodplain of the LCR or its tributaries, in
17 proximity to the sites that would be used for habitat establishment. Implementation of the
18 Conservation Plan and issuance of the section 10(a)(1)(B) permit would not change the amount
19 of water available to the LCR MSCP participants, the amount of water used by these
20 participants, or otherwise result in changes to environmental conditions beyond those analyzed
21 in Chapter 3 of this EIS/EIR.

22 As described in section 2.1.1.3, the Conservation Plan includes measures that would contribute
23 to maintaining existing desirable habitat areas within the planning area. The LCR MSCP
24 participants would establish a fund early in the term of the program to be expended on
25 assessing and implementing projects for maintaining existing native habitat that could occur
26 anywhere within the planning area. The types of activities that could be conducted include
27 construction of infrastructure for water delivery or movement; maintenance of marsh
28 vegetation by burning, water delivery, dredging, and other means; maintenance of moist soil
29 conditions in riparian land cover types⁷ (e.g., cottonwood-willow); dredging activities to
30 establish backwaters or backwater connection with the main river channel; removal or control
31 of undesirable vegetation such as saltcedar and *Arundo*; and other appropriate means to
32 maintain existing desirable habitat. Specific projects and locations have not been identified
33 (some of the projects are ongoing while others are only proposed), but these maintenance
34 activities would involve actions that are similar to the proposed action and it is reasonable to
35 assume that they would result in impacts that are similar to those described in Chapter 3 of this
36 EIS/EIR. Analyzing the environmental impacts of these measures is beyond the scope of this
37 EIS/EIR, and their implementation would not be authorized by decisions based on this report.

7 The term "land cover type" is used to describe the dominant feature of the land surface discernible from aerial photographs, defined by vegetation, water, or human uses.

1.3 RELATIONSHIP TO OTHER LCR DOCUMENTS PREPARED PURSUANT TO THE ENDANGERED SPECIES ACT

Reclamation, pursuant to the ESA, issued a BA for LCR operations and maintenance from Lake Mead to the SIB in August 1996 (USBR 1996). That BA served two purposes: (1) as initial documentation for the ESA section 7 consultation between Reclamation and the Service for discretionary operations of the LCR, and (2) as an initial reference for development and implementation of the proposed Conservation Plan by LCR stakeholders pursuant to ESA section 7 (for Federal actions) and ESA section 10 (for non-Federal actions). On April 30, 1997, the Service issued its BO (U. S. Fish and Wildlife Service [USFWS] 1997). The 1997 BO identified Reclamation's participation in developing the proposed Conservation Plan as the long-term strategy to address the environmental impacts of Reclamation's continued operation and maintenance activities on the LCR. Consultation on the 1997 BO was reinitiated at Reclamation's request in March 2002, and another BO was issued by the Service in April 2002 (USBR 2002, USFWS 2002e). This BO identified minor modifications to the provisions of its 1997 BO and extended coverage for Reclamation's discretionary actions on the LCR for 3 years to April 30, 2005.

With the approval of the LCR MSCP and issuance of the section 10(a)(1)(B) permit and section 7 BO in response to the LCR MSCP HCP and LCR MSCP BA, these new authorizations would supersede the 1997 BO, as amended by the 2002 BO. When the new BO on the LCR MSCP took effect, the following obligations of Reclamation under the 1997 BO and 2002 BO would be replaced with its obligations under the new BO.

- If any of the 1,400 acres of southwestern willow flycatcher habitat acquired and protected under the provisions of the 1997 BO Reasonable and Prudent Alternative (RPA) 5 should lose its protected status in the future, the affected habitat acreage will be replaced by southwestern willow flycatcher habitat created under the LCR MSCP.
- Ongoing physical maintenance of native fish impoundments constructed by Reclamation as a condition of the 1997 BO RPA 3, as amended by the 2002 BO, will be included under the LCR MSCP.

Additionally, the Service issued a BO in January 2001 in response to Reclamation's August 2000 *Biological Assessment for Proposed Interim Surplus Criteria, Secretarial Implementation Agreements for California Water Plan Components and Conservation Measures on the Lower Colorado River (Lake Mead to the Southerly International Boundary)* (ISC/SIA BO). This BO analyzed the effects of the change in point of diversion of 400,000 af of Colorado River water on four ESA-listed species (Yuma clapper rail, southwestern willow flycatcher, bonytail, and razorback sucker). The LCR MSCP BA includes the same action for purposes of assessing and mitigating the impacts to the 23 covered and evaluation species not covered by the 2001 BO. The LCR MSCP HCP includes this action as part of the total 1.574 mafy in changes to point of diversion to obtain incidental take authorization for the non-Federal participants as to all 27 covered and evaluation species, including the four 2001 BO species. The Conservation Plan provides measures that overlap and duplicate the conservation measures provided to the four species that are benefited by the 2001 BO conservation measures. Despite the overlap in the impacts and mitigation measures, there are differences between the scopes of the 2001 BO and the Conservation Plan (e.g., the terms are different) that preclude the Conservation Plan from superseding that BO. Reclamation, with

support of funding from California agencies, would implement the conservation and mitigation measures identified in the 2001 BO in coordination with the implementation of the Conservation Plan. Where 2001 BO conservation measures are implemented in accordance with the Conservation Plan, these measures shall be considered as implementing those same conservation and mitigation measures in the Conservation Plan.

The following conservation measures identified in the 2001 BO, would be credited against the LCR MSCP conservation measure requirements:

- funding and support for razorback sucker studies at Lake Mead beyond 2005;
- rearing and stocking of 20,000 razorback suckers between Parker and Imperial Dams (Reaches 4 and 5);
- restoration or creation of 44 acres of backwaters as habitat for native fish;
- \$50,000 in funding to provide for the capture of wild-born bonytail from Lake Mohave;
- monitoring of 372 acres of existing occupied southwestern willow flycatcher habitat; and
- restoration and maintenance of 372 acres of southwestern willow flycatcher habitat.

1.4 REQUIRED ACTIONS AND PERMITS

The following sections identify the Federal and non-Federal actions and permits supported by this EIS/EIR, as well as future actions and permits that may be required to implement individual LCR MSCP projects.

1.4.1 Actions Supported by this EIS/EIR

1.4.1.1 Federal Actions

U.S. Fish and Wildlife Service

The Service, under the provisions of ESA section 10 and its internal consultation under section 7, must evaluate the section 10(a)(1)(B) permit application to be able to authorize the incidental take of listed species and provide a means to authorize the incidental take of non-listed species should such species become listed in the future. Pursuant to sections 7 (b)(4) and (o)(2) of the ESA, the authorization by the Service is to be based on a determination whether the Federal action of issuing a section 10(a)(1)(B) permit is likely to jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify critical habitat. The Service may choose to (1) issue a permit conditioned on implementation of the LCR MSCP HCP as submitted, (2) issue a permit conditioned on implementation of the LCR MSCP HCP as supplemented with other measures specified by the Service, or (3) to deny the permit. The Service will sign the Record of Decision (ROD) regarding the adoption or rejection of the proposed action presented in this EIS/EIR.

U.S. Bureau of Reclamation

Reclamation would implement the Conservation Plan for the LCR MSCP Steering Committee if the section 10(a)(1)(B) permit were issued by the Service. In addition, Reclamation would

1 initiate a section 7 consultation on ongoing and future covered activities upon completion of the
2 BA. Reclamation must formally accept or reject the terms and conditions of the Service's BO
3 and will sign the ROD regarding the adoption or rejection of the proposed action presented in
4 this EIS/EIR.

5 *Other Federal Agencies*

6 Other Federal participants in the LCR MSCP may contribute funding for implementing the
7 Conservation Plan.

8 **1.4.1.2 Non-Federal Actions**

9 Each non-Federal participant must independently evaluate the LCR MSCP HCP and determine
10 whether to execute the agreements required to participate in the implementation of the
11 Conservation Plan. As the lead agency under CEQA, Metropolitan will independently evaluate
12 and, if appropriate, certify this EIR and make CEQA findings. Non-Federal participants in
13 Arizona, California, and Nevada would contribute funding for implementing the Conservation
14 Plan.

15 **1.4.1.3 Cooperating, Responsible, and Trustee Agency Actions**

16 Under NEPA, cooperating agencies are agencies other than the lead agency that have
17 discretionary authority over the proposed action, jurisdiction by law, or special expertise with
18 respect to the environmental impacts expected to result from an action. The Hualapai Tribe has
19 been identified as cooperating agency based on the technical expertise of its members and its
20 jurisdiction over land that might be used for conservation. Other California agencies that are
21 requesting incidental take authorizations for their covered actions are responsible agencies
22 under CEQA. They will consider the EIR prepared by Metropolitan and reach their own
23 conclusions regarding whether and how to approve the proposed action. CDFG, a trustee
24 agency under CEQA for fish and wildlife resources, reviewed and provided comments on the
25 Draft EIR.

26 **1.4.2 Future Permits and Approvals Required to Implement Specific LCR MSCP** 27 **Projects**

28 Permits and approvals that may be required prior to the implementation of future, site-specific
29 LCR MSCP conservation projects include the following:

- 30 • U.S. Army Corps of Engineers (Corps) permits for dredging and fill activities;
- 31 • Rivers and Harbors Act section 10 permit;
- 32 • BIA approval of leases for conservation actions on tribal lands;
- 33 • Approvals by tribal governments for conservation actions on tribal lands;
- 34 • Section 106 consultation with State Historic Preservation Office (SHPO) for Federal
35 projects;
- 36 • Clean Air Act conformity determinations for Federal projects;

- Air quality permits from the relevant air quality management or air pollution control districts for construction activities and some maintenance activities, such as the use of prescribed burns for marsh restoration;
- AGFD permits to stock or take fish and wildlife;
- NDOW clearance for activities potentially affecting state-listed species;
- National Pollutant Discharge Elimination System (NPDES) permits from the California Regional Water Quality Control Boards (RWQCB) or Nevada Bureau of Water Pollution Control (NBWPC); Arizona Pollutant Discharge Elimination System permits from the Arizona Department of Environmental Quality (ADEQ);
- Section 401, Clean Water Act (CWA), Water Quality Certifications from ADEQ, RWQCBs, or NBWPC. Section 401 certification on tribal lands is handled by the U.S. Environmental Protection Agency (EPA) if the tribes do not have primacy or by the individual tribes if they do; and
- Collecting permits, section 10(a)(1)(A) permits, and migratory bird permits from the Service.

Additionally, the NPS, BLM, BIA, and the Service's NWRs may modify their land management plans to be consistent with the Conservation Plan and may make decisions regarding whether to integrate this plan with other conservation actions on the LCR.

1.5 SCOPING AND PUBLIC INVOLVEMENT

Public scoping was conducted to help identify areas of concern and specific issues that should be addressed in the EIS/EIR. Notices that a combined EIS/EIR was being prepared were published in 1999 and 2000. Subsequent notices were made in October 2003. The first Notice of Intent (NOI)/Notice of Preparation (NOP) was published in the *Federal Register* (Volume 64, Number 95, pages 27000-27002) on May 18, 1999. A supplemental NOI/NOP was published in the *Federal Register* (Volume 65, Number 134, pages 43031-43034) on July 12, 2000. These two NOI/NOPs are included in Appendix B. A Revised NOP of a Draft EIR was issued by Metropolitan on July 25, 2000 and also is included in Appendix B, as is the NOP issued on October 17, 2003. Three public scoping meetings held in 2000 were supplemental to the original scoping meetings in 1999 and involved a formal presentation on planning progress and conceptual preliminary alternatives. Four additional public information meetings were held in November 2003 in Arizona, California, and Nevada to present information regarding the alternatives being evaluated in this EIS/EIR and to obtain public comments regarding issues to be addressed in this document. Scoping summary reports documenting the issues raised at these meetings are included in Appendix C.

Approximately 360 copies of the Draft EIS/EIR were distributed to agencies, public libraries, Indian tribes, organizations, and individuals for review during a 60-day period ending on August 18, 2004. Additionally, three public hearings were held in Henderson, Nevada; Blythe, California; and Phoenix, Arizona on July 20-22, 2004 in order to receive public comments on the Draft EIS/EIR. Additional information regarding the public involvement program is included in section 7.2.1.

1.6 DOCUMENT ORGANIZATION

Volume I is the Final EIS/EIR, and it incorporates minor text changes made in response to comments on the Draft EIS/EIR and text clarifications. The LCR MSCP Final HCP is Volume II, and the accompanying Final BA is Volume III. Comment letters received during the 60-day public review period for the Draft EIS/EIR and verbal comments provided during three public hearings held during this period are included in LCR MSCP Volume V, along with responses to the comments. All appendices for these documents are included in Volume IV. Together, these documents comprise the NEPA, CEQA, and ESA documentation required to implement the proposed action. The EIS/EIR is organized as follows:

- The proposed action and alternatives are described in detail in Chapter 2 of this EIS/EIR;
- The affected environment, environmental consequences of these actions, and mitigation measures for significant impacts are described in Chapter 3 for each resource considered;
- Chapter 4 addresses cumulative impacts;
- Chapter 5 provides a comparison of the action and no action alternatives;
- Chapter 6 includes other NEPA and CEQA considerations, such as growth-inducing impacts, the relationship between short-term uses of the environment and long-term productivity, and irreversible and irretrievable commitments of resources; and
- Chapter 7 includes a discussion of regulatory compliance, consultation, and coordination.
- The remaining sections include a list of references and persons/agencies consulted; a glossary of technical terms; definitions of acronyms; and a list of preparers.